IC-2720H ADJUSTMENT PROCEDURES

1 PREPARATION

Some adjustments must be performed on the adjustment mode. OPC-478/U CLONING CABLE and CS-2720 CLONING SOFTWARE (Rev.1.0 or later) are required when entering the adjustment mode.

■ REQUIRED TEST EQUIPMENT

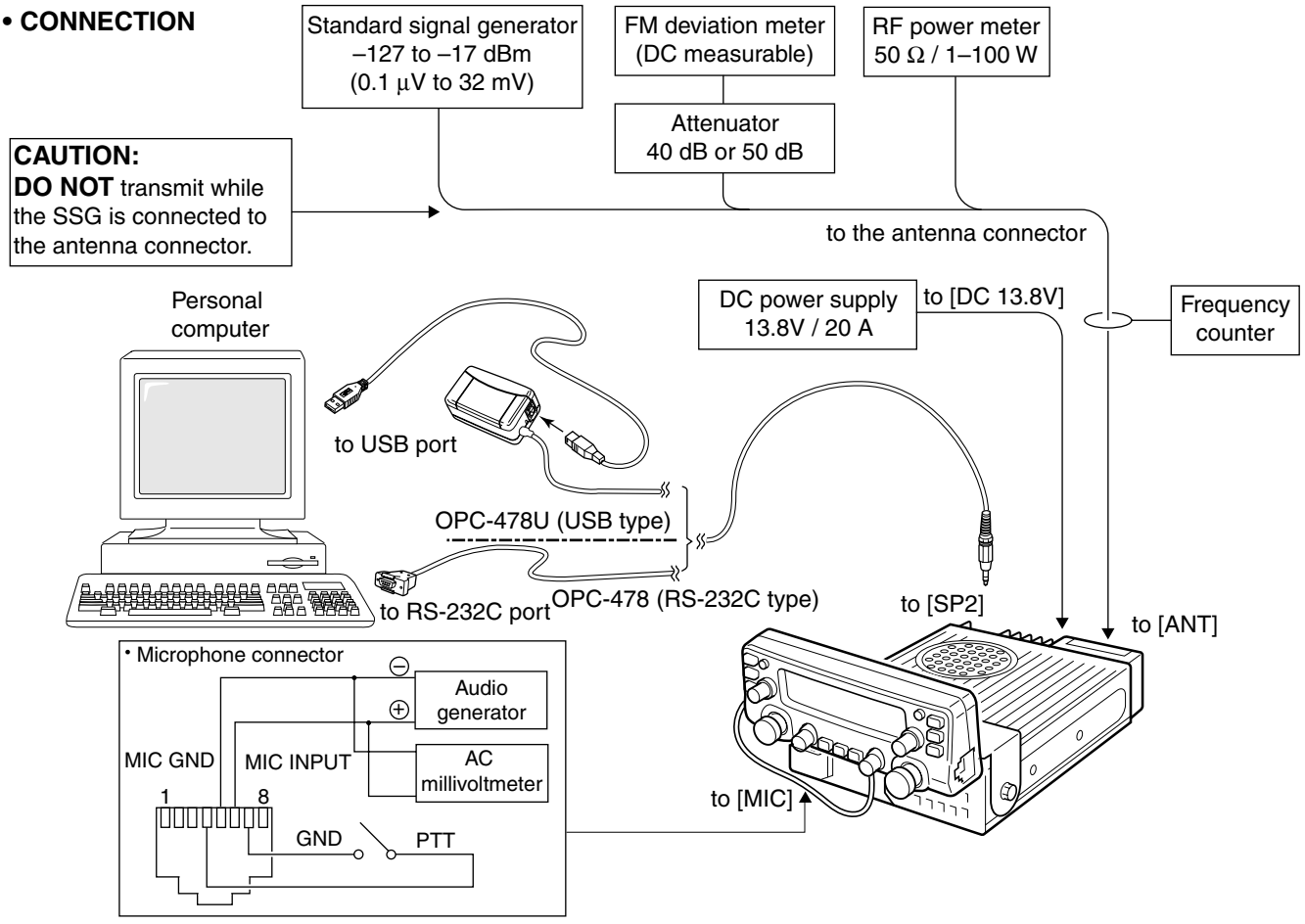
EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC power supply	Output voltage : 13.8 V DC Current capacity : 20 A or more	Audio generator	Frequency range : 0.1–1000 MHz output level : 1–500 mV
RF power meter (terminated type)	Measuring range : 1–100 W Frequency range : 100–600 MHz Input impedance : 50 kΩ/V DC or better	Attenuator	Power attenuation : 40–50 dB Capacity : 100 W or more
Frequency counter	Frequency range : 0.1–600MHz Frequency accuracy : ±1 ppm or better Sensitivity : 100 mV or better	Standard signal generator (SSG)	Frequency range : 100–1200 MHz output level : 0.1µV–32 mV
FM deviation meter	Frequency range : 100–600 MHz Measuring range : 1–100 W	Oscilloscope	Frequency range : DC–20 MHz output level : 0.01–20 V
		AC millivoltmeter	Measuring range : 10 mV–10 V

■ SYSTEM REQUIREMENTS

- IBM® PC/AT compatible computer
- Microsoft® Windows® 98/98SE/2000/Me/XP
- At least 800 × 600 pixel display
- CS-2720 CLONING SOFTWARE
- USB or RS-232C serial port
- OPC-478 CLONING CABLE (RS-232C type)
  OPC-478U CLONING CABLE (USB type)

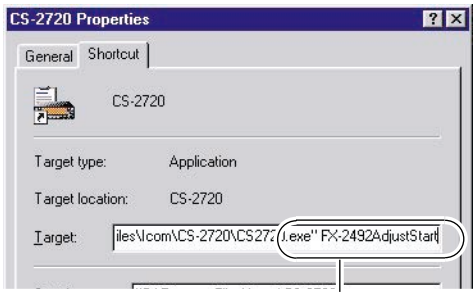
Microsoft and Windows are registered trademarks of Microsoft Corporation in the U.S.A.and other countries.
IBM is a registered trademark of International Business Machines in the U.S.A. and other countries..

• CONNECTION



2 ENTERING THE ADJUSTMENT MODE

① Install the CS-2720 CLONING SOFTWARE (Refer to the CS-2720 instruction manual in detail).
② Right click the CS-2720's icon on the desktop, then select the "Property".
③ Add "FX-2492AdjustStart" to the end of command line as follow.
"C\:Program Files\CS-2720\CS2720.exe"␣FX-2492AdjustStart
④ Connect the OPC-478/U CLONING CABLE to the speaker jack [SP2], then double-click the CS-2720's icon to run the program.

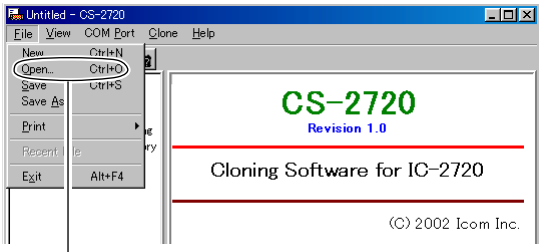


Add "FX-2492AdjustStart"to the end of command line.

⑤ Click the [File] on the menu bar and select the [Open] to read the icf file. (Select the file according to the version as follow.)

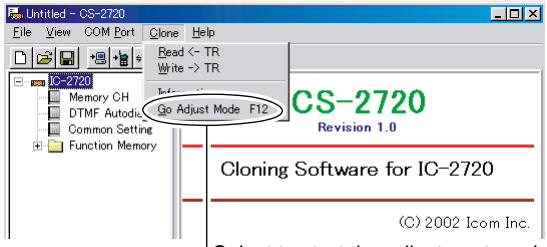
•ICF FILE EXPLANATION

ICF FILE	VERSION	ICF FILE	VERSION
#02	EUR	#06	KOR
#03	ITR	#07	AUS
#04	TPE	#08	SEA
#05	USA	#09	EXP



Select the icf file.

⑥ Click the [Clone] on the menu bar and select the [Go Adjust Mode F12] to enter the adjustment mode. "cLonE In" message is appeared on the IC-2720H's display while cloning.

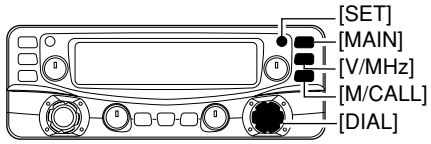


Select to start the adjustment mode.

CAUTION: Need to back up the original memory data to use CS-2720. Otherwise, the transceiver's memory channels are overwritten the data and deleted the original data at the same time when cloning the adjustment frequency file (icf file).

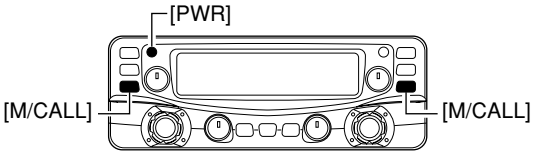
■ OPERATION ON THE ADJUSTMENT MODE

Change the adjustment channel [UP] : Right [MAIN] key
Change the adjustment channel [DOWN] : Right [V/MHz] key
Change the adjustment value : Right [DIAL]
Store the adjustment value : Right [SET] key
Select the mode : Right [M/CALL] key
(FM→AM→FM-N→FM)
Some adjustments need to push [SET] key to write the adjustment value to the CPU.



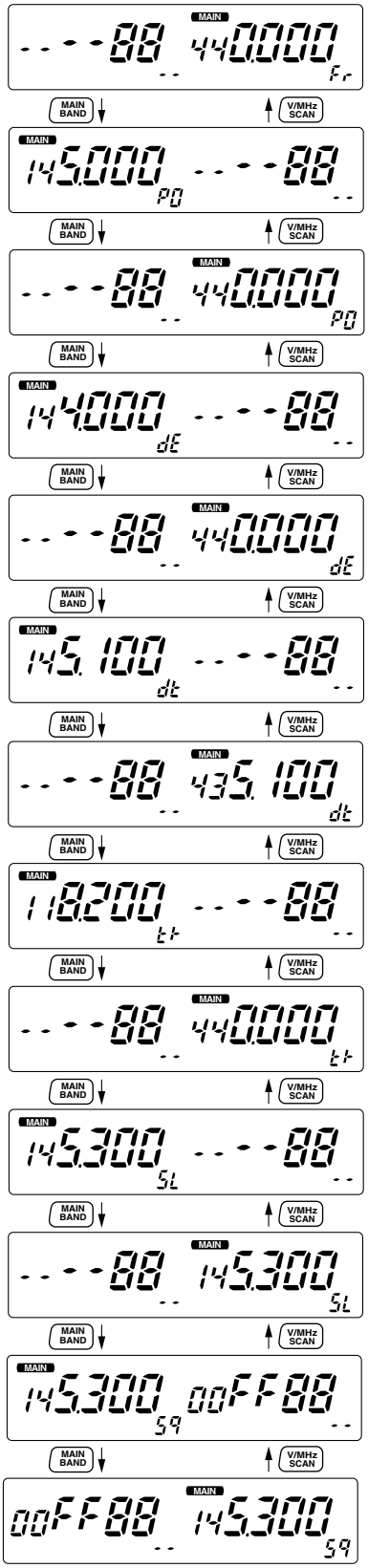
■ EXITING FROM THE ADJUSTMENT MODE

① Turn the power OFF.
② Push and hold the right and left [M/CALL] keys, and then turn power ON.



ATTENTION: Need to cancel the adjustment mode when the adjustment is finished. Otherwise, the transceiver does not work properly.

■ ADJUSTMENT MODE CONSTRUCTION



Frequency adjustment (Starting item)

VHF TX power adjustment

UHF TX power adjustment

VHF modulation adjustment

UHF modulation adjustment

VHF DTCS adjustment

UHF DTCS adjustment

Left band RX sensitivity adjustment

Right band RX sensitivity adjustment

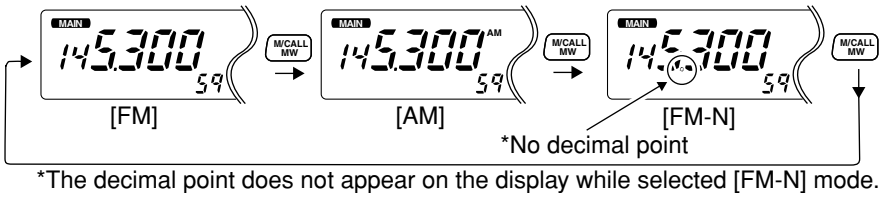
Left band S-meter adjustment

Right band S-meter adjustment

Left band squelch adjustment

Right band squelch adjustment

■ MODE SELECT ON THE ADJUSTMENT MODE

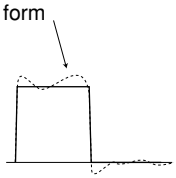
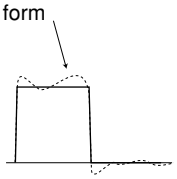


*The decimal point does not appear on the display while selected [FM-N] mode.

3 SOFTWARE ADJUSTMENT (TRANSMITTING)

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE
			UNIT	LOCATION	
REFERENCE FREQUENCY [Fr]	1	• Operating freq. : 450.000 MHz [USA] : 440.000 MHz [Other] • Output power : Low • Connect the RF power meter or 50 Ω dummy load to the antenna connector. • Transmitting	Rear panel	Loosely couple a frequency counter to the antenna connector.	450.0000 MHz [USA] 440.0000 MHz [Other]
VHF OUTPUT POWER (HIGH) [Po]	1	• Operating freq. : 145.000 MHz [TPE], [KOR] : 146.000 MHz [USA], [AUS], [SEA], [EXP] • Output power : High • Transmitting	Rear panel	Connect an RF power meter to the antenna connector.	50.0 W
(MID) [Po]	2	• Output power : Mid • Transmitting			22.0 W [TPE] 15.0 W [Other]
(LOW) [Po]	3	• Output power : Low • Transmitting			5.0 W
UHF OUTPUT POWER (HIGH) [Po]	1	• Operating freq. : 450.000 MHz [USA] : 440.000 MHz [Other] • Output power : High • Transmitting	Rear panel	Connect an RF power meter to the antenna connector.	37.0 W
(MID) [Po]	2	• Output power : Mid • Transmitting			22.0 W [TPE] 15.0 W [Other]
(LOW) [Po]		• Output power : Low • Transmitting			5.0 W
VHF FM MODULATION LOW FREQ. [dE]	3 1	• Operating freq. : 144.000 MHz • Output power : Low • IF bandwidth : Wide • Connect an audio generator to the [MIC] jack and set as: 1.0 kHz/80 mVrms [USA] 1.0 kHz/20 mVrms [Other] • Set an FM deviation meter as: HPF : 50 Hz LPF : 20 kHz De-emphasis : OFF Detector : (P–P)/2 • Transmitting	Rear panel	Connect an FM deviation meter to the antenna connector through an attenuator.	±4.6 kHz
HIGH FREQ. [dE]	2	• Operating freq. :146.000 MHz [TPE], [KOR] : 148.000 MHz [USA], [AUS], [SEA], [EXP] • Transmitting			±4.6 kHz

SOFTWARE ADJUSTMENT (TRANSMITTING)-Continued

ADJUSTMENT		ADJUSTMENT CONDITION	MEASUREMENT		VALUE
			UNIT	LOCATION	
UHF FM MODULATION LOW FREQ. [dE]	1	• Operating freq. : 440.000 MHz [USA] : 430.000 MHz [Other] • Output power : Low • IF bandwidth : Wide • Connect an audio generator to the [MIC] jack and set as: 1.0 kHz/80 mVrms [USA] 1.0 kHz/20 mVrms [Other] • Set an FM deviation meter as: HPF : 50 Hz LPF : 20 kHz De-emphasis : OFF Detector : (P–P)/2 • Transmitting	Rear panel	Connect an FM deviation meter to the antenna connector through an attenuator.	±4.6 kHz
HIGH FREQ. [dE]	2	• Operating freq. : 450.000 MHz [USA] : 440.000 MHz [Other] • Transmitting			±4.6 kHz
VHF DTCS WAVE FORM [dt]	1	• Operating freq. : 145.100 MHz [TPE], [KOR] : 146.100 MHz [USA], [AUS], [SEA], [EXP] • IF bandwidth : Wide • Output power : Low • Set an FM deviation meter as: HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P–P)/2 • No signal is applied to the [MIC] connector. • Transmitting	Rear panel	Connect an FM deviation meter with an oscilloscope to the antenna connector through an attenuator.	Set to flat wave form 
UHF DTCS WAVE FORM [dt]	1	• Operating freq. : 445.100 MHz [USA] : 435.100 MHz [Other] • IF bandwidth : Wide • Output power : Low • Set an FM deviation meter as: HPF : OFF LPF : 20 kHz De-emphasis : OFF Detector : (P–P)/2 • No signal is applied to the [MIC] connector. • Transmitting	Rear panel	Connect an FM deviation meter with an oscilloscope to the antenna connector through an attenuator.	Set to flat wave form 

SOFTWARE ADJUSTMENT (RECEIVING)

ADJUSTMENT		ADJUSTMENT CONDITION	OPERATION
SENSITIVITY LEFT BAND 1 [tr]	1	• Operating frequency : 118.200 MHz • IF bandwidth : Wide • Connect the SSG to the antenna connector and set as : Level : –97 dBm* (3.2 µV) Modulation : 1 kHz Deviation : ±3.5 kHz • Receiving	Push the [SET] key.
	2	• Operating frequency : 146.200 MHz • Receiving	Push the [SET] key.
	3	• Operating frequency : 179.800 MHz • Receiving	Push the [SET] key.
SENSITIVITY LEFT BAND 2 [tr]	1	• Operating frequency : 180.200 MHz • Set the SSG level : –87 dBm* (10 µV) • Receiving	Push the [SET] key.
	2	• Operating frequency : 220.365 MHz • Set the SSG level : –97 dBm* (3.2 µV) • Receiving	Push the [SET] key.
	3	• Operating frequency : 259.800 MHz • Receiving	Push the [SET] key.
SENSITIVITY LEFT BAND 3 [tr]	1	• Operating frequency : 260.200 MHz • Set the SSG level : –97 dBm* (3.2 µV) • Receiving	Push the [SET] key.
	2	• Operating frequency : 320.200 MHz • Receiving	Push the [SET] key.
	3	• Operating frequency : 374.800 MHz • Receiving	Push the [SET] key.
SENSITIVITY LEFT BAND 4 [tr]	1	• Operating frequency : 375.200 MHz • Set the SSG level : –97 dBm* (3.2 µV) • Receiving	Push the [SET] key.
	2	• Operating frequency : 430.200 MHz [USA] : 410.200 MHz [Other] • Receiving	Push the [SET] key.
	3	• Operating frequency : 449.800 MHz • Receiving	Push the [SET] key.
SENSITIVITY LEFT BAND 5 [tr]	1	• Operating frequency : 460.200 MHz [USA] : 450.200 MHz [Other] • Set the SSG level : –97 dBm* (3.2 µV) • Receiving	Push the [SET] key.
	2	• Operating frequency : 490.200 MHz [USA] : 500.200 MHz [Other] • Receiving	Push the [SET] key.
	3	• Operating frequency : 549.800 MHz • Receiving	Push the [SET] key.
SENSITIVITY RIGHT BAND 1 [tr]	1	• Operating frequency : 118.200 MHz • Set the SSG level : –97 dBm* (3.2 µV) • Receiving	Push the [SET] key.
	2	• Operating frequency : 146.200 MHz • Receiving	Push the [SET] key.
	3	• Operating frequency : 173.800 MHz • Receiving	Push the [SET] key.

*This output level of the standard signal generator (SSG) is indicated as SSG's open circuit.

SOFTWARE ADJUSTMENT (RECEIVING)-Continued

ADJUSTMENT		ADJUSTMENT CONDITION	OPERATION
SENSITIVITY RIGHT BAND 2 [tr]	1	• Operating frequency : 375.200 MHz • Set the SSG level : –97 dBm* (3.2 µV) • Receiving	Push the [SET] key.
	2	• Operating frequency : 410.200 MHz • Receiving	Push the [SET] key.
	3	• Operating frequency : 449.800 MHz • Receiving	Push the [SET] key.
SENSITIVITY RIGHT BAND 3 [tr]	1	• Operating frequency : 450.200 MHz • Set the SSG level : –97 dBm* (3.2 µV) • Receiving	Push the [SET] key.
	2	• Operating frequency : 500.200 MHz • Receiving	Push the [SET] key.
	3	• Operating frequency : 549.800 MHz • Receiving	Push the [SET] key.
S-METER LEFT BAND [SL]	1	• Operating frequency : 145.300 MHz [TPE], [KOR] : 146.300 MHz [USA], [AUS], [SEA], [EXP] • IF bandwidth : Wide • Connect the SSG to the antenna connector and set as : Level : –107 dBm* (1 µV) Modulation : 1 kHz Deviation : ±3.5 kHz • Receiving	Push the [SET] key.
	2	• Operating frequency : 220.365 MHz • Receiving	Push the [SET] key.
	3	• Operating frequency : 350.085 MHz • Receiving	Push the [SET] key.
	4	• Operating frequency : 445.200 MHz [USA] : 435.200 MHz [Other] • Receiving	Push the [SET] key.
S-METER RIGHT BAND [SL]	1	• Operating frequency : 145.300 MHz [TPE], [KOR] : 146.300 MHz [USA], [AUS], [SEA], [EXP] • Receiving	Push the [SET] key.
	2	• Operating frequency : 445.200 MHz [USA] : 435.200 MHz [Other] • Receiving	Push the [SET] key.
	3	• Operating frequency : 910.200 MHz • Receiving	Push the [SET] key.

*This output level of the standard signal generator (SSG) is indicated as SSG's open circuit.

SOFTWARE ADJUSTMENT (RECEIVING)-Continued

ADJUSTMENT		ADJUSTMENT CONDITION	OPERATION
SQUELCH LEFT BAND1 WIDE [Sq]	1	• Operating frequency : 145.300 MHz [TPE], [KOR] : 146.300 MHz [USA], [AUS], [SEA], [EXP] • IF bandwidth : Wide • Connect the SSG to the antenna connector and set as : Level : –129 dBm* (0.079 µV) Modulation : 1 kHz Deviation : ±3.5 kHz • Receiving	Push the [SET] key.
	2	• Operating frequency : 145.300 MHz [TPE], [KOR] : 146.300 MHz [USA], [AUS], [SEA], [EXP] • Receiving	Push the [SET] key 3 times.
SQUELCH LEFT BAND 1 NARROW [Sq] (USA only)	1	• Operating frequency : 146.300 MHz • IF band width : Narrow • Connect the SSG to the antenna connector and set as : Level : –129 dBm* (0.079 µV) Modulation : 1 kHz Deviation : ± 1.75 kHz • Receiving	Set the FM-N mode and then push the [SET] key.
	2	• Operating frequency : 146.300 MHz • IF bandwidth : Narrow • Receiving	• Set the FM-N mode and then push the [SET] key. • Repeat the above operation 3 times.
SQUELCH LEFT BAND 2 WIDE [Sq]	1	• Operating frequency : 220.365 MHz • IF band width : Wide • Connect the SSG to the antenna connector and set as : Level : –124 dBm* (0.14 µV) Modulation : 1 kHz Deviation : ±3.5 kHz • Receiving	Push the [SET] key.
	2	• Operating frequency : 220.365 MHz • Receiving	Push the [SET] key 3 times.
SQUELCH LEFT BAND 2 NARROW [Sq] (USA)	1	• Operating frequency : 220.365 MHz • IF band width : Narrow • Connect the SSG to the antenna connector and set as : Level : –124 dBm* (0.14 µV) Modulation : 1 kHz Deviation : ± 1.75 kHz • Receiving	Set the FM-N mode and then push the [SET] key.
	2	• Operating frequency : 220.365 MHz • IF bandwidth : Narrow • Receiving	• Set the FM-N mode and then push the [SET] key. • Repeat the above operation 3 times.

*This output level of the standard signal generator (SSG) is indicated as SSG's open circuit.

SOFTWARE ADJUSTMENT (RECEIVING)-Continued

ADJUSTMENT		ADJUSTMENT CONDITION	OPERATION
SQUELCH LEFT BAND 3 WIDE [Sq]	1	• Operating frequency : 350.085 MHz • IF band width : Wide • Connect the SSG to the antenna connector and set as : Level : –124 dBm* (0.14 µV) Modulation : 1 kHz Deviation : ±3.5 kHz • Receiving	Push the [SET] key.
	2	• Operating frequency : 350.085 MHz • Receiving	Push the [SET] key 3 times.
SQUELCH LEFT BAND 3 NARROW [Sq] (USA)	1	• Operating frequency : 350.085 MHz • IF bandwidth : Narrow • Connect the SSG to the antenna connector and set as : Level : –124 dBm* (0.14 µV) Modulation : 1 kHz Deviation : ± 1.75 kHz • Receiving	Set the FM-N mode and then push the [SET] key.
	2	• Operating frequency : 350.085 MHz • IF bandwidth : Narrow • Receiving	• Set the FM-N mode and then push the [SET] key. • Repeat the above operation 3 times.
SQUELCH LEFT BAND 4 WIDE [Sq]	1	• Operating frequency : 445.200 MHz [USA] : 435.200 MHz [Other] • IF band width : Wide • Connect the SSG to the antenna connector and set as : Level : –129 dBm* (0.079 µV) Modulation : 1 kHz Deviation : ±3.5 kHz • Receiving	Push the [SET] key.
	2	• Operating frequency : 445.200 MHz [USA] : 435.200 MHz [Other] • Receiving	Push the [SET] key 3 times.
SQUELCH LEFT BAND 4 NARROW [Sq] (USA)	1	• Operating frequency : 445.200 MHz • IF bandwidth : Narrow • Connect the SSG to the antenna connector and set as : Level : –129 dBm* (0.079 µV) Modulation : 1 kHz Deviation : ± 1.75 kHz • Receiving	Set the FM-N mode and then push the [SET] key.
	2	• Operating frequency : 445.200 MHz • IF bandwidth : Narrow • Receiving	• Set the FM-N mode and then push the [SET] key. • Repeat the above operation 3 times.

This output level of the standard signal generator (SSG) is indicated as SSG's open circuit.

SOFTWARE ADJUSTMENT (RECEIVING)-Continued

ADJUSTMENT		ADJUSTMENT CONDITION	OPERATION
SQUELCH RIGHT BAND 1 WIDE [Sq]	1	• Operating frequency : 145.300 MHz [TPE], [KOR] : 146.300 MHz [USA], [AUS], [SEA], [EXP] • IF band width : Wide • Connect the SSG to the antenna connector and set as : Level : –129 dBm* (0.079 µV) Modulation : 1 kHz Deviation : ±3.5 kHz • Receiving	Push the [SET] key.
	2	• Operating frequency : 145.300 MHz [TPE], [KOR] : 146.300 MHz [USA], [AUS], [SEA], [EXP] • Receiving	Push the [SET] key 3 times.
SQUELCH RIGHT BAND 2 WIDE [Sq]	1	• Operating frequency : 445.200 MHz [USA] : 435.200 MHz [Other] • IF band width : Wide • Connect the SSG to the antenna connector and set as : Level : –129 dBm* (0.079 µV) • Receiving	Push the [SET] key.
	2	• Operating frequency : 445.200 MHz [USA] : 435.200 MHz [Other] • Receiving	Push the [SET] key 3 times
SQUELCH RIGHT BAND 3 WIDE [Sq]	1	• Operating frequency : 910.200 MHz • IF band width : Wide • Connect the SSG to the antenna connector and set as : Level : –110 dBm* (0.71 µV) [USA] : –119 dBm* (0.25 µV) [Other] • Receiving	Push the [SET] key.
	2	• Operating frequency : 910.200 MHz • Receiving	Push the [SET] key 3 times.

This output level of the standard signal generator (SSG) is indicated as SSG's open circuit.

4 ADJUSTMENT MODE CONTENTS LIST

Some adjustment frequency depend on the version.

NO.	Left band (VHF)			Right band (UHF)			Adjustment contents	Presetting value
	Frequency display		Mch	Frequency display		Mch		
0		– – – – 6 2	– –	MAIN	4 4 0.0 0 0	F r	Initial data	Change inhibited
1		– – – – A d	– –	MAIN	4 4 0.0 0 0	F r		
2		– – – – d A	– –	MAIN	4 4 0.0 0 0	F r		
3		– – – – 8 A	– –	MAIN	4 4 0.0 0 0	F r		
4		– – – – 7 6	– –	MAIN	4 4 0.0 0 0	F r		
5		– – – – 8 0	– –	MAIN	4 4 0.0 0 0	F r		
6		– – – – 8 c	– –	MAIN	4 4 0.0 0 0	F r		
7		– – – – 7 8	– –	MAIN	4 4 0.0 0 0	F r		
8		– – – – F c	– –	MAIN	4 4 0.0 0 0	F r	Frequency adjustment	Change permitted
9	MAIN	1 4 5.0 0 0	P o		– – – – 8 F	– –	VHF TX power adjustment	Change permitted
10		– – – – 6 5	– –	MAIN	4 4 0.0 0 0	P o	VHF TX power adjustment	Change permitted
11	MAIN	1 4 4.0 0 0	d E		– – – – A 0	– –	Modulation adjustment for lowest frq.(VHF)	Change permitted
12	MAIN	1 4 6.0 0 0	d E		– – – – 9 d	– –	Modulation adjustment for highest frq.(VHF)	Change permitted
13		– – – – 8 D	– –		4 3 0.0 0 0	d E	Modulation adjustment for lowest frq.(UHF)	Change permitted
14		– – – – 8 5	– –		4 4 0.0 0 0	d E	Modulation adjustment for highest frq.(UHF)	Change permitted
15	MAIN	1 4 5.1 0 0	d t		– – – – F F	– –	DTCS adjustment	Change inhibited
16	MAIN	1 4 5.1 0 0	d t		– – – – 8 8	– –	DTCS adjustment	Change permitted
17		– – – – 0 0	– –	MAIN	4 3 5.1 0 0	d t	DTCS adjustment	Change permitted
18		– – – – 6 7	– –	MAIN	4 3 5.1 0 0	d t	DTCS adjustment	Change inhibited
19	MAIN	1 1 8.2 0 0	t r		2 F 2 4 3 1	5 2	To set t1 tracking	Change permitted
20	MAIN	1 4 6.2 0 0	t r		8 3 7 1 8 E	5 b	To set t2 tracking	
21	MAIN	1 7 9.8 0 0	t r		b b A F E A	A d	To set t3 tracking	
22	MAIN	1 8 0.2 0 0	t r		2 6 2 8 7 F	4 c	To set t1 tracking	Change permitted
23	MAIN	2 2 0.3 6 5	t r		7 E 6 3 8 0	8 0	To set t2 tracking	
24	MAIN	2 5 9.8 0 0	t r		E c 9 b 7 F	8 0	To set t3 tracking	
25	MAIN	2 6 0.2 0 0	t r		4 A 4 3 8 0	8 0	To set t1 tracking	Change permitted
26	MAIN	3 2 0.2 0 0	t r		8 9 8 6 5 5	2 7	To set t2 tracking	
27	MAIN	3 7 4.8 0 0	t r		9 c c A 8 0	7 d	To set t3 tracking	
28	MAIN	3 7 5.2 0 0	t r		3 d 1 E 4 A	2 5	To set t1 tracking	Change permitted
29	MAIN	4 1 0.2 0 0	t r		9 1 7 F 8 6	8 b	To set t2 tracking	
30	MAIN	4 4 9.8 0 0	t r		d d d 8 E b	E c	To set t3 tracking	
31	MAIN	4 5 0.2 0 0	t r		6 2 4 6 4 4	8 F	To set t1 tracking	Change permitted
32	MAIN	5 0 0.2 0 0	t r		c 0 8 F 8 8	E F	To set t2 tracking	
33	MAIN	5 4 9.8 0 0	t r		E E d 9 c c	E b	To set t3 tracking	
34		3 6 3 0 3 0	4 3	MAIN	1 1 8.2 0 0	t r	To set t1 tracking	Change permitted
35		7 d 8 0 7 E	6 4	MAIN	1 4 6.2 0 0	t r	To set t2 tracking	
36		A 8 A c F 1	9 b	MAIN	1 7 3.8 0 0	t r	To set t3 tracking	

ADJUSTMENT MODE CONTENTS LIST (Continued)

Some adjustment frequency depend on the version.

NO.	Left band (VHF)			Right band (UHF)			Adjustment contents	Presetting value
	Frequency display		Mch	Frequency display		Mch		
37		3 c 4 A 6 2	0 E	MAIN	3 7 5.2 0 0	t r	To set t1 tracking	Change permitted
38		9 c A 2 9 E	7 9	MAIN	4 1 0.2 0 0	t r	To set t2 tracking	
39		b 8 E d F b	A c	MAIN	4 4 9.8 0 0	t r	To set t3 tracking	
40		2 0 6 3 6 A	6 c	MAIN	4 5 0.2 0 0	t r	To set t1 tracking	Change permitted
41		A E b 3 A 7	A E	MAIN	5 0 0.2 0 0	t r	To set t2 tracking	
42		d 9 f 1 F 5	F 7	MAIN	5 4 9.8 0 0	t r	To set t3 tracking	
43	MAIN	1 4 5.3 0 0	S L		– – – – F F	– –	S-meter adjustment	Change permitted
44	MAIN	2 2 0.3 6 5	S L		– – – – F 3	– –	S-meter adjustment	Change permitted
45	MAIN	3 5 0.0 8 5	S L		– – – – F 5	– –	S-meter adjustment	Change permitted
46	MAIN	4 3 5.2 0 0	S L		– – – – F A	– –	S-meter adjustment	Change permitted
47		– – – – F 2	– –	MAIN	1 4 5.3 0 0	S L	S-meter adjustment	Change permitted
48		– – – – F 2	– –	MAIN	4 3 5.2 0 0	S L	S-meter adjustment	Change permitted
49		– – – – E E	– –	MAIN	9 1 0.2 0 0	S L	S-meter adjustment	Change permitted
50	MAIN	1 4 5.3 0 0	S q		0 0 F F 0 4	– –	SQL level adjustment (Open tight) N/W	Change permitted
51	MAIN	1 4 5.3 0 0	S q		0 0 F F 3 0	– –	SQL level adjustment (Open threshold) N/W	
52	MAIN	1 4 5.3 0 0	S q		0 0 F F 2 4	– –	SQL level adjustment (Close tight) N/W	
53	MAIN	1 4 5.3 0 0	S q		0 0 F F 3 6	– –	SQL level adjustment (Close threshold) N/W	
54	MAIN	2 2 0.3 6 5	S q		0 0 F F 0 4	– –	SQL level adjustment (Open tight) N/W	Change permitted
55	MAIN	2 2 0.3 6 5	S q		0 0 F F 3 1	– –	SQL level adjustment (Open threshold) N/W	
56	MAIN	2 2 0.3 6 5	S q		0 0 F F 2 4	– –	SQL level adjustment (Close tight) N/W	
57	MAIN	2 2 0.3 6 5	S q		0 0 F F 3 A	– –	SQL level adjustment (Close threshold) N/W	
58	MAIN	3 5 0.0 8 5	S q		0 0 F F 0 4	– –	SQL level adjustment (Open tight) N/W	Change permitted
59	MAIN	3 5 0.0 8 5	S q		0 0 F F 2 E	– –	SQL level adjustment (Open threshold) N/W	
60	MAIN	3 5 0.0 8 5	S q		0 0 F F 2 2	– –	SQL level adjustment (Close tight) N/W	
61	MAIN	3 5 0.0 8 5	S q		0 0 F F 3 b	– –	SQL level adjustment (Close threshold) N/W	
62	MAIN	4 3 5.2 0 0	S q		0 0 F F 0 4	– –	SQL level adjustment (Open tight) N/W	Change permitted
63	MAIN	4 3 5.2 0 0	S q		0 0 F F 2 E	– –	SQL level adjustment (Open threshold) N/W	
64	MAIN	4 3 5.2 0 0	S q		0 0 F F 2 2	– –	SQL level adjustment (Close tight) N/W	
65	MAIN	4 3 5.2 0 0	S q		0 0 F F 3 A	– –	SQL level adjustment (Close threshold) N/W	

N/W: Narrow/Wide

ADJUSTMENT MODE CONTENTS LIST (Continued)

Some adjustment frequency depend on the version.

NO.	Left band (VHF)			Right band (UHF)			Adjustment contents	Presetting value
	Frequency display		Mch	Frequency display		Mch		
66		0 0 F F 0 4	– –	MAIN	1 4 5.3 0 0	S q	SQL level adjustment (Open tight) N/W	Change permitted
67		0 0 F F 2 4	– –	MAIN	1 4 5.3 0 0	S q	SQL level adjustment (Open threshold) N/W	
68		0 0 F F 1 d	– –	MAIN	1 4 5.3 0 0	S q	SQL level adjustment (Close tight) N/W	
69		0 0 F F 3 4	– –	MAIN	1 4 5.3 0 0	Sq	SQL level adjustment (Close threshold) N/W	
70		0 0 F F 0 4	– –	MAIN	4 3 5.2 0 0	S q	SQL level adjustment (Open tight) N/W	Change permitted
71		0 0 F F 2 9	– –	MAIN	4 3 5.2 0 0	S q	SQL level adjustment (Open threshold) N/W	
72		0 0 F F 1 E	– –	MAIN	4 3 5.2 0 0	S q	SQL level adjustment (Close tight) N/W	
73		0 0 F F 3 4	– –	MAIN	4 3 5.2 0 0	S q	SQL level adjustment (Close threshold) N/W	
74		0 0 F F 0 4	– –	MAIN	9 1 0.2 0 0	S q	SQL level adjustment (Open tight) N/W	Change permitted
75		0 0 F F 2 c	– –	MAIN	9 1 0.2 0 0	S q	SQL level adjustment (Open threshold) N/W	
76		0 0 F F 2 1	– –	MAIN	9 1 0.2 0 0	S q	SQL level adjustment (Close tight) N/W	
77		0 0 F F 3 1	– –	MAIN	9 1 0.2 0 0	S q	SQL level adjustment (Close threshold) N/W	
78	MAIN	1 4 5.1 0 0	c t		– – – – F F	– –	CTCSS auto generation	Change inhibited
79	MAIN	1 4 5.1 0 0	d t		– – – – d 6	– –	DTCS auto generation	
80		– – – – F F	– –	MAIN	4 3 5.1 0 0	c t	CTCSS auto generation	
81		– – – – d 6	– –	MAIN	4 3 5.1 0 0	d t	DTCS auto generation	
82	MAIN	1 4 5.0 0 0	r e		– – – – 9 E	– –	TX protection voltage	
83		– – – – 8 d	– –	MAIN	4 4 0.0 0 0	r e	TX protection voltage	
84	MAIN	1 4 5.0 0 0	– –		– – – – 0 0	– –	From 84 to 199 normal operation	Change inhibited
85		– – – – 0 0	– –	MAIN	4 4 0.0 0 0	– –		
199								

N/W: Narrow/Wide